



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/689,472

10/20/2003

Christopher S. Caldwell

RTI-5

7924

7590

07/14/2005

Browning Bushman P.C.  
Suite 1800  
5718 Westheimer  
Houston, TX 77057-5771

EXAMINER

MAYO, TARA L

ART UNIT

PAPER NUMBER

3671

DATE MAILED: 07/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/689,472

**Applicant(s)**

CALDWELL ET AL.

**Examiner**

Tara L. Mayo

**Art Unit**

3671

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 25 April 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-33 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Specification***

1. The prior objection to the Abstract has been overcome by the response filed 25 April 2005.

### ***Claim Objections***

2. The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered claims 10 through 34 have been renumbered 9 through 33.

### ***Claim Rejections - 35 USC § 112***

3. The prior rejections of the claims under 35 USC §112, second paragraph have been overcome by the response filed 25 April 2005 wherein Applicant remarks:

with regard to claim 1,

the claim is intended to be drawn to the combination of the centralizer and the receptacle;

and

with regard to claims 19 through 21,

the first and second transition zones are related to the upset portion.

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 10 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Halkyard (U.S. Patent No. 5,683,205 A).

Halkyard '205, as seen in Figure 4, shows a centralizer system comprising:

with regard to claim 1,

a metallic pipe (36; as admitted by cross section see MPEP 608.02) comprising a pipe outer diameter less than the inner diameter of a receptacle (42) so as to be insertable into the receptacle and relatively moveable within the receptacle;

an upset portion formed on said metallic pipe having an upset outer diameter greater than said pipe outer diameter; and

a centralizer mounted to said metallic pipe, said centralizer having an outer diameter less than said receptacle inner diameter for insertion into said receptacle;

with regard to claim 10,

wherein said centralizer has an outer surface with a curvature portion for contact with said receptacle; and

Art Unit: 3671

with regard to claim 11,

wherein said centralizer has a substantially cylindrical outer surface portion for contact with said receptacle.

With regard to claim 1, the method of forming the device is not germane to the issue of patentability of the device itself. Therefore, the claimed limitation of heat shrink mounting has not been given patentable weight.

3. Claims 1 through 3, 10, 11, 18 through 20, 29, 32 and 33 are rejected under 35 U.S.C. 102(e) as being anticipated by Finn et al. (U.S. Patent No. 6,648,074).

Finn et al. '074, as seen in Figure 11, disclose a centralizer system comprising:  
with regard to claims 1 and 18,

a metallic pipe insertable into a receptacle (82);  
an upset portion (92) formed on said metallic pipe; and  
a centralizer (108) mounted to said upset portion;

with regard to claims 2 and 18,

an upset transition zone (90) on at least one side of said upset portion, the outer of said upset transition zone decreasing with distance axially away from said upset portion;

with regard to claim 3,

wherein said centralizer is also mounted to at least a portion of said upset transition zone;  
with regard to claim 10,

Art Unit: 3671

wherein said centralizer has an outer surface with a curvature portion for contact with said receptacle;

with regard to claims 11 and 33,

wherein said centralizer has a substantially cylindrical outer surface portion for contact with said receptacle;

with regard to claim 19,

a second upset transition zone (second element labeled 90);

with regard to claim 20,

wherein the first and second transition zones are mirror images with respect to each other;

and

with regard to claim 32,

wherein said centralizer has an outer tapered surface portion for contact with said receptacle.

With regard to claims 1, 3 and 29, the method of forming the device is not germane to the issue of patentability of the device itself. Therefore, the claimed limitation of heat shrink mounting has not been given patentable weight.

4. Claims 12 and 14 are rejected under 35 U.S.C. 102(e) as being anticipated by Angman et al. (U.S. Patent No. 6,585,052 B2).

Angman et al. '052, as seen in Figure 1, disclose a method for constructing a centralizer system comprising the steps of:

Art Unit: 3671

with regard to claim 12

forming a pipe (12);

forming an upset portion (16);

forming a centralizer (14);

heating said centralizer and positioning said centralizer over said upset portion;

and

cooling said centralizer relative to said upset portion (col. 4, lines 52 through 65);

and

with regard to claim 14,

forming an upset transition zone with an outer diameter that decreases with axial distance away from said upset portion.

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out

Art Unit: 3671

the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 4 and 21 through 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Finn et al. (U.S. Patent No. 6,648,074).

Finn et al. '074 further disclose:

with regard to claim 4,

the centralizer being substantially of solid metal construction (as admitted by cross-section; see MPEP 608.02); and

with regard to claim 25,

the transition zone outer diameter comprising a convex profile in an elevational view thereof.

Finn et al. '074 disclose all of the features of the claimed invention with the exception(s) of:

with regard to claim 4,

the centralizer comprising water flow ports;

with regard to claim 21,

the diameters of the first and second upset transition zones decreasing at different rates;

with regard to claim 22,



Art Unit: 3671

the transition zone outer diameter decreasing at a rate directly proportional to the axial distance from the upset portion;

with regard to claim 23,

the transition zone comprising a conical portion;

with regard to claim 24,

the transition zone outer diameter decreasing at a variable rate away from the upset portion;

with regard to claim 26,

the transition zone outer diameter comprising both a convex and a concave profile portion;

with regard to claim 27,

the transition zone comprising both a straight profile portion and a curved profile portion;  
and

with regard to claim 28,

the transition zone outer diameter being equal to the upset outer diameter on one end and being equal to the pipe outer diameter on an opposite end.

With regard to claim 4, it would have been obvious to one having ordinary skill in the art of marine structures at the time of invention to modify the device shown by Finn et al. '074 such that the centralizer would include water flow ports. The motivation would have been to provide the centralizer with means to facilitate its movement through water.

Art Unit: 3671

With regard to claims 21 through 28, the limitations recited therein are directed to the shape of the transition zone. It would have been obvious to one having ordinary skill in the art of pipes at the time the invention was made since it has been held that absent persuasive evidence that the particular configuration of a claimed device is significant, the shape of the same is an obvious matter of choice for one of ordinary skill in the art. *In re Dailey*, 357 F.2d 669, 149 USPQ 47 (CCPA 1966).

8. Claims 5 through 8, 15 through 17 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Finn et al. (U.S. Patent No. 6,648,074 B2) in view of Morris (U.S. Patent No. 3,560,060).

Finn et al. '074 teach all of the features of the claimed invention recited in claims 16 and 17 and as addressed above in section 9.

Finn et al. '074 further disclose the centralizer being substantially of solid metal construction (as admitted by cross-section; see MPEP 608.02).

Finn et al. '074 disclose all of the features of the claimed invention with the exception(s) of:

with regard to claims 5, 15 and 30,

the centralizer defining at least one groove;

with regard to claims 6, 15 and 30,

the at least one groove being selectively positioned in the centralizer;

with regard to claim 7,

the at least one groove being positioned adjacent to a first end of the upset portion; and

Art Unit: 3671

with regard to claim 8,

two grooves positioned adjacent opposite ends of the upset portion.

Morris '060 shows, as seen in Figure 1, shows a centralizer (G) for a sucker rod (4) comprising multiple grooves (24) for permitting the flow of fluids around the guide in the tubing (col. 2, lines 54 through 57).

With regard to claims 5 through 8, 15 and 30, it would have been obvious to one having ordinary skill in the art of marine structures at the time the invention was made to modify the centralizer shown by Finn et al. '074 such that it would include grooves as taught by Morris '060. The motivation would have been to facilitate the flow of fluids around the centralizer.

9. Claims 9 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Finn et al. (U.S. Patent No. 6,648,074 B2) in view of Halkyard (U.S. Patent No. 5,683,205 A).

Finn et al. '074 disclose all of the features of the claimed invention with the exception(s) of:

with regard to claims 9 and 31,

an insulative coating on an outer surface of the centralizer.

Halkyard '205, as seen in Figures 3 and 4, shows a centralizer system comprising a sleeve member (42) including a coating (50) for resisting wear (col. 3, lines 7 through 10) caused by relative movement of the sleeve member in receptacle opening (30).

With regard to claims 9 and 31, it would have been obvious to one having ordinary skill in the art of marine structures at the time the invention was made to modify the device shown by Finn et al. '074 such that the centralizer would include an insulative coating on its outer surface as taught by Halkyard '205. The motivation would have been to make the centralizer resistant to wear.

10. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Angman et al. (U.S. Patent No. 6,585,052 B2) in view of Morris (U.S. Patent No. 3,560,060).

Angman et al. '052 disclose all of the steps of the claimed method with the exception(s) of:

with regard to claim 13,

creating an annular groove in the centralizer.

Morris '060 shows, as seen in Figure 1, shows a centralizer (G) for a sucker rod (4) comprising multiple grooves (24) for permitting the flow of fluids around the guide in the tubing (col. 2, lines 54 through 57).

With regard to claim 13, it would have been obvious to one having ordinary skill in the art of marine structures at the time the invention was made to modify the method disclosed by Angman et al. '052 such that it would include the step of creating grooves in the centralizer as

Art Unit: 3671

taught by Morris '060. The motivation would have been to facilitate the flow of fluids around the centralizer.

***Response to Arguments***

11. Applicant's arguments filed 19 April 2005 have been fully considered but they are not persuasive.

In response to Applicant's statements that "heat shrink mounted" can be considered a structural limitation with reference to the manner that the centralizer is connected to the upset portion of the pipe, the Examiner contends that heat shrinking does not define a structural limitation. Therefore, any centralizer meets the claimed limitation.

***Conclusion***

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Art Unit: 3671

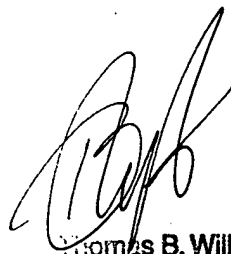
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tara L. Mayo whose telephone number is 571-272-6992. The examiner can normally be reached on Monday through Friday 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas B. Will can be reached on 571-272-6998. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



11 July 2005



Thomas B. Will  
Supervisory Patent Examiner  
Group 3600